



ATLANTA
404•653•6400
PALO ALTO
650•849•6600

FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, L.L.P.

1300 I STREET, N. W.
WASHINGTON, DC 20005-3315

202 • 408 • 4000
FACSIMILE 202 • 408 • 4400

JEFFREY A. BERKOWITZ
202-408-4023

October 22, 1999



TOKYO
011•813•3431•6943
BRUSSELS
011•322•646•0353

ATTORNEY DOCKET NO. 07710.0003-00

Box PATENT APPLICATION
Assistant Commissioner for Patents
Washington, D.C. 20231

Re: New U.S. Patent Application
Title: SYSTEMS AND METHODS FOR DISTRIBUTING
TELECOMMUNICATION SERVICES VIA A NETWORK
Inventors: Charles A. PEYSER, Constance BEYER,
Michael D. McLAUGHLIN, Daniel JONES

Sir:

We enclose the following papers for filing in the United States Patent and Trademark Office in connection with the above patent application.

1. Application - 25 pages, including 3 independent claims and 9 claims total.
2. Drawings - 16 sheets of informal drawings (Figures 1,2, 3A-B, 4, 5, 6A-C, 7, 8A-B, 9A-B, 10-12).
3. Declaration and Power of Attorney.
4. Recordation Form Cover Sheet and Assignment to TelecomXchange, Inc.
5. A check for \$800.00 representing a \$760.00 filing fee, and \$40.00 for recording the Assignment.

Applicant claims the right to priority based on Provisional Patent Application No. 60/138,509 filed June 10, 1999.

Please accord this application a serial number and filing date and record and return the Assignment to the undersigned.

FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, L.L.P.

Assistant Commissioner for Patents

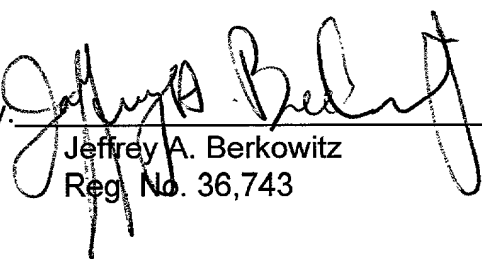
October 22, 1999

Page 2

The Commissioner is hereby authorized to charge any additional filing fees due and any other fees due under 37 C.F.R. § 1.16 or § 1.17 during the pendency of this application to our Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

By: 
Jeffrey A. Berkowitz
Reg. No. 36,743

JAB:jl
Enclosures

UNITED STATES PATENT APPLICATION

OF

**Charles A. PEYSER, Constance BEYER, Michael D. McLAUGHLIN, and
Daniel JONES**

FOR

**SYSTEMS AND METHODS FOR DISTRIBUTING
TELECOMMUNICATION SERVICES VIA A NETWORK**

LAW OFFICES

**FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N.W.
WASHINGTON, D. C. 20005
202-408-4000**

SYSTEMS AND METHODS FOR DISTRIBUTING TELECOMMUNICATION SERVICES VIA A NETWORK

RELATED APPLICATIONS

This application claims priority from U.S. Provisional Application No. 60/138,509, entitled "Methods For Providing Telecommunications Service Buying and Selling Via the Internet," filed on June 10, 1999, which is incorporated herein by reference.

This application is related to copending U.S. Application Serial No. 09/390,026 (Atty. Docket No. 7710.0001-00), entitled "Systems and Methods For Buying and Selling Telecommunication Services Via a Network," and copending U.S. Application Serial No. 09/390,025 (Atty. Docket No. 7710.0002-00), entitled "Systems and Methods For Aggregating Buyers For the Purchase of Telecommunication Services Via a Network," which are assigned to the same, and also incorporated herein by reference.

FIELD OF THE INVENTION

The present invention relates generally to the purchase of telecommunication services and, more particularly, to a forum through which buyers can purchase telecommunication services from a variety of sellers via a network, such as the Internet.

BACKGROUND OF THE INVENTION

Traditionally, telecommunication services, such as local, long distance, Internet, cellular services, etc., have been bought and sold through the interaction of people.

Typically, the buy-sell process takes one of two forms: (1) a buyer determines the

necessary telecommunication service requirements and contacts one or more sellers of these services; or (2) a seller proactively solicits the buyer, who may or may not be ready to purchase the services.

5 For larger-sized companies, the service requirements are usually complex and the buyer sophisticated. Therefore, the first form typically predominates (i.e., a buyer initiates the communication with a seller in these instances). For small and medium-sized companies, as well as for consumers, the service requirements are usually much less complex and the buyer less sophisticated. Therefore, the second form typically predominates. The seller contacts the buyer via different methods, such as door-to-door canvassing, telemarketing, direct mailing, advertising, etc.

10 A major disadvantage of the conventional buy-sell process is that sellers typically control the process. This is especially true in the case of consumers, small businesses, and associations. As a result, it is often difficult for these buyers to get the best possible deal.

15 Therefore, there is a need to shift control to buyers in the purchase of telecommunication services.

SUMMARY OF THE INVENTION

20 Systems and methods consistent with the present invention address this need by aggregating buyer purchase power in the purchase of telecommunication services.

In accordance with the purpose of the invention as embodied and broadly described herein, a system consistent with the present invention facilitates the purchase of

telecommunication services from a variety of sellers. The system stores a set of responses to purchase requests for telecommunication services associated with a plurality of service providers, each response reflecting at least one telecommunication service offering associated with one of the service providers and a related cost for the telecommunication service offering. The system establishes a session for considering the purchase of telecommunication services. A purchase request is input, including information indicating a requested telecommunication service. The system accesses the stored set of responses to purchase requests for at least one response reflecting at least one telecommunication service offering capable of satisfying the requested telecommunication service, and permits a requester to accept the response during the session.

BRIEF DESCRIPTION OF THE DRAWINGS

The accompanying drawings, which are incorporated in and constitute a part of this specification, illustrate an embodiment of the invention and, together with the description, explain the invention. In the drawings,

Fig. 1 is an exemplary diagram of a system consistent with the present invention;

Fig. 2 is an exemplary diagram of the telecommunication services manager of Fig. 1;

Fig. 3A is an exemplary diagram of the request for proposal (RFP) database of Fig. 2;

Fig. 3B is an exemplary diagram of the buyer database of Fig. 2;

Fig. 4 is a flowchart of processing for purchasing telecommunication services in a manner consistent with the present invention;

Fig. 5 is a flowchart of processing for registering a buyer in a manner consistent with the present invention;

5 Figs. 6A-6C are flowcharts of processing for creating an RFP in a manner consistent with the present invention;

Fig. 7 is a flowchart of processing for distributing an RFP in a manner consistent with the present invention;

10 Figs. 8A and 8B are flowcharts of processing for reviewing results of previously submitted RFPs in a manner consistent with the present invention;

Fig. 9A is a diagram of an exemplary user interface containing an RFP summary report;

Fig. 9B is a diagram of an exemplary user interface containing an RFP detailed report;

15 Fig. 10 is a flowchart of processing for reviewing industry information in a manner consistent with the present invention;

Fig. 11 is a flowchart of processing for changing buyer account information in a manner consistent with the present invention; and

20 Fig. 12 is a flow chart for processing an RFP using a spot market in a manner consistent with the present invention.

DETAILED DESCRIPTION

5 The following detailed description of implementations consistent with the present invention refers to the accompanying drawings. The same reference numbers in different drawings identify the same or similar elements. Also, the following detailed description does not limit the invention. Instead, the scope of the invention is defined by the appended claims.

10 Systems and methods consistent with the present invention provide a forum through which buyers and sellers of telecommunication services interact. The buyers specify the types of services desired and the sellers submit proposals for providing the services. The buyers select the proposals that meet their requirements and contract with the particular sellers to provide the desired services and/or additional services.

SYSTEM ELEMENTS

15 Fig. 1 is an exemplary diagram of a system 100 consistent with the present invention. The system 100 includes a buyer terminal 110 connected to several seller terminals 120 via a network 130. The system also includes a telecommunication services manager 140 connected to the buyer and seller terminals 110 and 120, respectively, via the network 130.

20 The buyer terminal 110 may include a personal computer, such as an IBM-compatible computer, or the like, with a connection to the network 130. A single buyer terminal 110 has been shown for simplicity. Those skilled in the art will note that the present invention contemplates more than one buyer terminal 110 connected to the network 130. The seller terminals 120 may also include personal computers with

connections to the network 130. The network 130 may include the Internet, an intranet, or some equivalent data network.

The telecommunication services manager (TSM) 140 provides a forum through which the buyer terminal 110 can interact with the seller terminals 120 to purchase telecommunication services. Fig. 2 is an exemplary diagram of TSM 140, including a processor 210, at least one memory 220, an input/output (I/O) port 230, and a set of databases 240. The processor 210 may include any conventional microprocessor, such as a Pentium produced by Intel. The memory 220 includes one or more conventional storage devices, such as RAM, ROM, EEPROM, etc. The I/O port 230 is a conventional communication port for communicating with the network 130.

The databases 240 include a large capacity storage device that contains at least four sets of databases: a request for proposal (RFP) database 242, a buyer database 244, a qualification database 246, and a seller database 248. The RFP database 242 stores RFPs prepared by buyers.

Fig. 3A is an exemplary diagram of the RFP database 242. Each entry in the RFP database 242 includes multiple fields for information on an RFP, including an RFP number 310, buyer information 320, types of service data 330, question data 340, and prior usage data 350. The RFP number 310 uniquely identifies a particular RFP. The buyer information 320 includes information describing the buyer, including, for example, the buyer's name, address, location, company, possibly information on other buyers (e.g., others referred to TSM 140 by the buyer), credit information, etc. This information may be provided by the buyer or obtained from one or more commercial databases.

The types of service data 330 includes information identifying the services that the buyer wishes to purchase. The question data 340 includes particular questions for the sellers posed by the buyer. The prior usage data 350 includes data regarding prior telephone service usage by the buyer and/or estimates or assumptions on such usage derived from the buyer's answers to a set of queries provided by TSM 140.

The buyer database 244 (Fig. 2) stores RFP replies. An RFP reply is a seller's answer to an RFP. Fig. 3B is an exemplary diagram of the buyer database 244. Each entry in the buyer database 244 includes multiple fields for information regarding an RFP, including a buyer ID name 360, an RFP number 370, and one or more RFP replies 380. The buyer ID name 360 uniquely identifies a buyer. The RFP number 370 is the same as the RFP number 310 that uniquely identifies an RFP. There may be more than one RFP number 370 associated with a single buyer, if the buyer submitted more than one RFP. Each of the RFP replies 380 includes a seller's response to the buyer's RFP.

The qualification database 246 (Fig. 2) stores rules for qualifying a buyer to use the system 100. The database 246 includes rules, for example, that validate the identity of a buyer by comparing the buyer's contact information, social security number, or federal tax identification to a commercially available database or by analyzing the buyer's email address. Of course, other qualification rules may be used.

The seller database 248 stores seller information, such as boilerplate RFP replies and filter data, and may contain an area for the sellers to store data. The filter data contains criteria provided by the sellers as to the types of RFPs they want to receive. For

example, a seller might indicate that they will provide service to only particular areas and desire RFPs requesting service in these areas.

PROCESSING FOR PURCHASING TELECOMMUNICATION SERVICES

Fig. 4 is a flowchart of processing for purchasing telecommunication services in a manner consistent with the present invention. The processing begins when a buyer, using buyer terminal 110, logs into TSM 140 via the network 130 [step 410]. The buyer may do this directly by using a conventional modem or some other connection or indirectly by entering an Internet address to access TSM's web site on the world wide web.

Once logged in, TSM 140 determines whether the buyer is registered, for example, by requiring the buyer to enter a login identifier and password [step 420]. It is also possible to store this information in a special file on the buyer terminal 110 so that when the buyer accesses the TSM web site, the stored information is provided automatically to TSM 140 for verification. If the buyer has not previously registered, TSM 410 registers the buyer [step 430].

Fig. 5 is a flowchart of processing for registering a buyer in a manner consistent with the present invention. TSM 140 prompts the buyer to enter contact information [step 510]. The contact information might include the buyer's name, title, telephone and fax numbers, email address, and/or the name of the buyer's business. From this information, TSM 140 determines whether the buyer represents a business [step 520]. If so, TSM 140 prompts the buyer for business demographics, including, for example, the company size, industry, number of locations, whether there are any international sites,

typical monthly spending on telecommunication services, etc. [step 530]. Alternatively or additionally, TSM 140 accesses a commercial database to obtain this information.

5 Once TSM 140 obtains the business demographics or if the buyer does not represent a business, TSM 140 determines whether the buyer represents a group of buyers [step 540]. The buyer may represent a group of buyers, such as a group of family and friends, association members, a group of small businesses, etc., that have previously agreed, or have agreed based on a recommendation of TSM 140, to submit an RFP for their telecommunication services. The seller that wins the selection provides service to all members of the group, though some members may be permitted to later drop out. This aggregation of buyers helps the buyers obtain a better price from the sellers by combining their purchasing power. If the buyer represents a group, TSM 410 prompts the buyer to identify the group representative and the members of the group by name or number (i.e., size) [step 550].

10
15
20 Once TSM 140 obtains the group information or if the buyer does not represent a group, TSM 140 requests that the buyer enter a buyer ID name [step 560]. The buyer ID name uniquely identifies the buyer and typically consists of several alphanumeric characters. TSM 140 then determines whether the ID name that the buyer entered is unique, possibly by comparing the name with a database of previously entered names [step 570]. If the name has already been taken, TSM 140 informs the buyer to enter another name [step 560]. TSM 140 then accepts the unique buyer ID name and assigns an initial password [step 580]. TSM 140 may then send the initial password to the buyer via email, regular mail, or by other mechanisms.

Once the buyer successfully registers, TSM 140 presents the buyer with several options [step 440] (Fig. 4): (1) to create an RFP; (2) to review results of previously submitted RFPs; (3) to review industry information; and (4) to change buyer account information. If the buyer decides to create an RFP [step 450], processing continues with the flowcharts of Figs. 6A-6C. If the buyer decides to review results of previously submitted RFPs [step 460], processing continues with the flowcharts of Figs. 8A and 8B. If the buyer decides to review industry information [step 470], processing continues with the flowchart of Fig. 10. Finally, if the buyer decides to change account information [step 480], processing continues with the flowchart of Fig. 11.

PROCESSING FOR CREATING AN RFP

Figs. 6A-6C are flowcharts of processing for creating an RFP in a manner consistent with the present invention. Although a series of steps is provided, the order of the steps does not matter. When the buyer chooses to create an RFP, TSM 140 generates a unique RFP number for it [step 605] (Fig. 6A). TSM 140 then prompts the buyer to provide a descriptive name for the RFP [step 610].

Next, TSM 140 requests that the buyer identify the business sites for which service is sought [step 615]. TSM 140 prompts the buyer to specify the service(s) desired for each business site [step 620]. The buyer might select among several types of services, such as local, long distance, toll free, calling card, Internet, conference calling, private line/data, etc. Alternatively or additionally, the buyer might authorize TSM 140 to obtain customer service records from the buyer's local telephone company. For each service selected, TSM 140 prompts the buyer to identify the features to purchase [step 625]. The

buyer might indicate that a feature is required, desired, or not wanted, and may indicate whether a service is new for the site or is replacing an already existing service.

Once the buyer identifies all the desired services for each site [steps 630 and 635], TSM 140 prompts the buyer for billing preference information [step 640]. The buyer specifies the name(s) and address(es) for the service bill. In certain instances, the buyer may also specify other billing parameters, such as the date upon which the bill will be due each month.

Next, TSM 140 requests that the buyer provide information regarding prior use of telecommunication services [step 645] (Fig. 6B). The buyer might provide copies of recent telecommunication service bills by fax, email, or regular mail or the buyer might enter this information into an electronic form provided by TSM 140. Alternatively, TSM 140 may access a database that contains this information. At this time, the buyer might also specify any changes to the prior usage. If no prior use data exists, such as in the case of a new company, the buyer might project the usage.

TSM 140 then prompts the buyer to specify the RFP dates, such as the RFP reply due date, the start of services date, and the duration of services date [step 650]. The RFP reply date is the date by which all sellers must respond. The start of services date is the date upon which the buyer wants the new services to begin. The duration of services date is the length of the service contract desired by the buyer. Typically, the buyer specifies service contract lengths in terms of six month increments. The buyer may also include one or more questions for potential sellers regarding their services.

Next, TSM 140 compiles an RFP distribution list [step 655]. TSM 140 may present an alphabetical list of participating sellers from which the buyer may select those to include on the RFP distribution list. Only those sellers included in the list will receive the buyer's RFP. TSM 140 then requests that the buyer identify preferred methods of contact by the sellers [step 660]. For example, the buyer might specify that the sellers communicate only through TSM 140, that the sellers communicate via regular mail, or that the sellers communicate directly with the buyer via email, telephone, etc.

TSM 140 qualifies the buyer according to the rules stored in the qualification database 246 to minimize the number of fraudulent RFPs submitted to the system 100 [step 665]. TSM 140 may qualify the buyer by comparing the buyer's contact information, social security number, or federal tax identification to a commercially available database, by analyzing the buyer's email address, or by other mechanisms to verify the identity of the buyer.

If the buyer passes the qualification process [step 670], TSM 140 records that the buyer is qualified and updates an RFP status report to change the status of the RFP from "Submitted" to "Distributed" [step 675]. TSM 140 then stores the RFP in the RFP database 242 [step 680].

If the buyer fails the qualification process [step 670], TSM 140 records the activity of the non-qualified buyer and updates the RFP status report to indicate so [step 685] (Fig. 6C). TSM 140 then notifies the buyer of the result of the qualification process [step 690]. If the buyer is a legitimate buyer, TSM 140 may permit the buyer to contact a service agent to prove the buyer's legitimacy.

Once the buyer completes the RFP, TSM 140 distributes it. Fig. 7 is a flowchart of processing for distributing an RFP in a manner consistent with the present invention. TSM 140 uses the filter data in the seller database 248 to determine the manner for distributing the RFP to the sellers on the distribution list. In other words, TSM 140 analyzes the filter data corresponding to the sellers on the distribution list to identify which sellers will receive the RFP and makes it available to them [step 710]. Sellers may then access the RFP via the TSM web site with the appropriate log on identifier and password. Alternatively, TSM 140 might send the RFP to the sellers via email, regular mail, fax, etc.

Once the RFP is made available, the individual sellers determine whether to accept or reject it [step 720]. The sellers then generate replies for the RFP based on whether the RFP is accepted or rejected. TSM 140 receives the RFP replies from the sellers [step 730] and updates the buyer's RFP status information to indicate whether the RFP was accepted or rejected by the seller [step 740]. TSM 140 then stores the RFP replies and the status information in the buyer database 244 [step 750].

PROCESSING FOR REVIEWING RFP RESULTS

Figs. 8A and 8B are flowcharts of processing for reviewing results of previously submitted RFPs in a manner consistent with the present invention. When a buyer wants to see the results of a previously submitted RFP, TSM 140 generates and displays an RFP summary report [step 805]. TSM 140 periodically updates the report as it receives RFP replies from the sellers.

Fig. 9A is a diagram of an exemplary user interface in the form of a web page 900 containing an RFP summary report 910 consistent with the present invention. The summary report 910 includes an RFP number 920, an RFP name 930, a submit date 940, a due date 950, a total number of requested bidders 960, and a total number of responses so far 970. The RFP number 920 uniquely identifies an RFP. The buyer may have submitted more than one RFP and, therefore, may have more than one RFP number. The RFP name 930 is the name that the buyer provided for the RFP.

The submit date 940 is the date that the buyer completed the RFP. The due date 950 is the date by which all sellers must respond to the RFP to have their RFP replies considered by the buyer. The total number of requested bidders 960 is the total number of sellers on the RFP distribution list. The total number of responses so far 970 is the number of responses received from the sellers to date.

TSM 140 determines whether the buyer desires detailed information regarding a particular RFP shown in the RFP summary report based on input from the buyer [step 810] (Fig. 8A). If so, TSM 140 generates and displays a detailed report for the RFP [step 815].

Fig. 9B is a diagram of an exemplary user interface in the form of a web page 980 containing an RFP detailed report 990 consistent with the present invention. The detailed report 990 includes both the RFP number and name, as well as the status of the sellers' analysis. The status might include "Accepted, but not yet complete," "Accepted, reply is complete," or "Rejected, no reply forthcoming." The report 990 might also identify the

sellers on the distribution list and the status of each reply. The buyer may select one of the sellers from the report to read the reply or find out why the RFP was rejected.

5 TSM 140 determines whether the buyer desires detailed information regarding any particular RFP reply based on input from the buyer [step 820] (Fig. 8A). If so, TSM 140 displays the reply for the buyer [step 825]. Alternatively, TSM 140 might email a copy of the reply to the buyer. If the buyer wants to review another RFP reply [step 830], TSM 140 displays the reply for the buyer [step 825]. If the buyer finally decides to place an order [step 835], TSM 140 generates an order form containing the specifics from the seller's RFP reply and displays it along with the seller's contractual terms and conditions [step 840] (Fig. 8B).

10 If the buyer accepts the terms and conditions [step 845], TSM 140 sends an alert to the selected seller indicating the buyer's intent to order, along with the buyer's contact information [step 850]. Of course, TSM 140 might inform the seller, and possibly all sellers, of the buyer's contact information at some earlier point. Once selected, the seller may contact the buyer to sign a contract for the desired telecommunication services.

15 TSM 140 also notifies all of the rejected sellers that the buyer does not intend to order from them [step 855]. Finally, TSM 140 sends a confirmation to the buyer and updates the buyer's RFP status information [step 860].

PROCESSING FOR REVIEWING INDUSTRY INFORMATION

20 Fig. 10 is a flowchart of processing for reviewing industry information in a manner consistent with the present invention. When a buyer indicates a desire to review industry information, TSM 140 presents the buyer with several options [step 1010], such

as to learn about new technology and services, to review recent industry announcements, and to review sellers' web sites.

If the buyer wants to learn about new technology and services [step 1020], TSM 140 links the buyer to web pages providing such information using conventional technology. If the buyer wants to review recent industry announcements [step 1030], TSM 140 links the buyer to web pages providing this information using conventional technology. If the buyer wants to review sellers' web sites [step 1040], TSM 140 links the buyer to these web sites over the network 130 using conventional technology.

5

Continued

PROCESSING FOR CHANGING BUYER ACCOUNT INFORMATION

Fig. 11 is a flowchart of processing for changing buyer account information in a manner consistent with the present invention. When the buyer wants to change the buyer's account information, TSM 140 presents the buyer with several options [step 1110], such as to change contact information, to change business demographics, and to change password.

If the buyer wants to change the contact information [step 1120], TSM 140 presents the buyer with the current information and permits the buyer to change it. TSM 140 receives the updated contact information and stores it [step 1125]. If the buyer wants to change the business demographics [step 1130], TSM 140 presents the buyer with the current information and permits the buyer to change it. TSM 140 receives the updated business demographics and stores it [step 1135].

If the buyer wants to change the password [step 1140], TSM 140 prompts the buyer to enter the current password and then the new password twice. TSM receives the new password, and if the current password is correct and the two entries of the new password match, TSM 140 records the new password [step 1145]. When the buyer completes all changes, the buyer so indicates [step 1150].

In an alternative configuration, TSM 140 forms a "spot market" for the sellers' offerings. A spot market is a market for available goods or services in which sellers of those goods or services control the market for their offerings but use an intermediary to make the market, i.e., bringing buyers and sellers together. As a market maker this intermediary is distinguishable from an agent for the seller because agents generally have

flexibility when selling goods or services on behalf of sellers, including for example the ability to offer discounts. A market maker for a spot market generally does not have such flexibility.

Spot Markets

5 In this alternative configuration, TSM 140 maintains in seller database 248 information on selected sellers' offerings, including for example telecommunications services and products, used to form RFP replies. For example, a seller of telecommunication services might indicate in database 248 terms for certain of its telecommunication services such that TSM 140 can form RFP replies on behalf of the seller. The seller, however, has complete control over these terms and can access database 248 at any point to modify the terms of the bid.

10 Sellers in this configuration are not required to access RFP database 242 to respond to selected RFPs (e.g., accept or reject RFPs). TSM 140 generates RFP replies on behalf of the sellers with offering information in database 248. Each of these RFP replies constitutes a seller's acceptance to a RFP. These acceptances may be available for a limited period. For example, a buyer begins a session with TSM 140 and completes a RFP indicating a need for a selected telecommunications service and, during that session TSM 140 forms one or more RFP replies on behalf of one or more sellers willing to provide the selected telecommunications service under specific terms that the TSM 140 derives from information in seller database 248. Each reply is available for the buyer to accept only during the current session with TSM 140. Once that session is terminated the RFP reply corresponding to the buyer's RFP is no longer available for the buyer to accept.

Figure 12 is a flow chart of the steps used by buyers and sellers in the spot market configuration. In a manner substantially the same as that described above in connection with Figs. 4 and 5, a buyer first accesses TSM 140 [step 1210] and inputs a RFP [step 1220]. A spot market managing component of TSM 140 monitors the RFP database 242 for newly input RFPs [steps 1230 and 1240]. When a new RFP is added to database 242, the spot market managing component accesses seller database 248 for information on sellers' offerings that may satisfy the requirements of the new RFP [step 1250]. When the spot market managing component identifies offerings in the database, the component forms one or more RFP replies on behalf of sellers that indicate a willingness for TSM 140 to generate RFP replies without involving the sellers in this process [step 1260]. The RFP reply/replies are then presented to the buyer [step 1270], and the buyer may accept a reply [step 1280]. If at any point during this process it is determined that the buyer's session with TSM 140 has terminated the buyer can no longer accept a reply. This permits a seller to modify terms for offerings at any point with assurance that buyers will only receive RFP replies using current information based on the bid response data.

In yet another configuration, a seller may indicate to TSM 140 a willingness to be bound by the terms of a TSM-generated RFP reply. This indication may be in the form of a flag or other code corresponding to a seller's offerings and included in seller database 248.

CONCLUSION

The systems and methods consistent with the present invention provide a forum through which buyers can purchase telecommunication services from a variety of sellers. The present invention levels the playing field by giving buyers more power than they presently have in the buy-sell process.

5 The foregoing description of preferred embodiments of the present invention provides illustration and description, but is not intended to be exhaustive or to limit the invention to the precise form disclosed. Modifications and variations are possible in light of the above teachings or may be acquired from practice of the invention. The scope of the invention is defined by the claims and their equivalents.

10 For example, the RFP approval process has been described as a group of sellers receiving an RFP and separately determining whether to approve or reject it. Alternatively, TSM 140 may contain a database of previously generated replies from the sellers. TSM 140 may query the database using the terms of the RFP and obtain one or more replies to present to the buyer.

WHAT IS CLAIMED IS

1. A computer-implemented method for distributing telecommunication services, the method comprising:

storing a set of responses to purchase requests for telecommunication services associated with a plurality of service providers, each response reflecting at least one telecommunication service offering associated with one of the service providers and a related cost for the telecommunication service offering;

establishing a session for considering the purchase of telecommunication services;

inputting a purchase request including information indicating a requested telecommunication service;

accessing the stored set of responses to purchase requests for at least one response reflecting at least one telecommunication service offering capable of satisfying the requested telecommunication service; and

permitting a requester to accept the response during the session.

2. The method of claim 1, further comprising:

terminating the session, such that when the session is terminated the response can no longer be accepted.

3. The method of claim 1, wherein the response can only be accepted during the session.

LAW OFFICES

FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, D. C. 20005
202-408-4000

4. The method of claim 1, further comprising:
permitting access by service providers to the stored set of responses to purchase requests for telecommunication services.

5. The method of claim 1, further comprising:
denying access by the service providers to the stored set of responses to purchase requests for telecommunication services during the session.

6. The method of claim 1, further comprising:
denying access by a service provider, during the session, to at least one response of the stored set of responses to requests for telecommunication services, wherein the response to which access is denied is the same as the response reflecting at least one telecommunication service offering capable of satisfying the requested telecommunication service.

7. The method of claim 1, further comprising:
permitting each service provider to modify the stored set of responses to requests for telecommunications services to reflect changes in the service provider's telecommunication service offerings.

8. A telecommunication service providing system, comprising:

a server having access to a memory containing a set of responses to purchase requests for telecommunication services, each response reflecting at least one telecommunication service offering associated with a service provider and a related cost for the telecommunication service offering;

5 a client, electronically connectable to the server, to establish a session for (i) inputting a purchase request including information indicating a requested telecommunication service, (ii) accessing the stored set of responses to purchase requests for at least one response reflecting at least one telecommunication service offering capable of satisfying the requested telecommunication service, and (iii) providing an acceptance to the response during the session.

10 9. A computer-implemented method for distributing telecommunication services, the method comprising:

15 storing a set of responses to purchase requests for telecommunication services, each response reflecting at least one telecommunication service offering associated with a service provider and a related cost for the telecommunication service offering;

inputting a purchase request including information indicating a requested telecommunication service;

20 accessing the stored set of responses to purchase requests for at least one response reflecting at least one telecommunication service offering capable of satisfying the requested telecommunication service; and

permitting a requester to accept the response.

ABSTRACT

5 A system facilitates the purchase of telecommunication services from a variety of
sellers. The system stores a set of responses to purchase requests for telecommunication
services associated with a plurality of service providers, each response reflecting at least
one telecommunication service offering associated with one of the service providers and a
related cost for the telecommunication service offering. The system establishes a session
for considering the purchase of telecommunication services. A purchase request is input,
including information indicating a requested telecommunication service. The system
accesses the stored set of responses to purchase requests for at least one response
reflecting at least one telecommunication service offering capable of satisfying the
requested telecommunication service, and permits a requester to accept the response
during the session.

10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100
101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
123
124
125
126
127
128
129
130
131
132
133
134
135
136
137
138
139
140
141
142
143
144
145
146
147
148
149
150
151
152
153
154
155
156
157
158
159
160
161
162
163
164
165
166
167
168
169
170
171
172
173
174
175
176
177
178
179
180
181
182
183
184
185
186
187
188
189
190
191
192
193
194
195
196
197
198
199
200
201
202
203
204
205
206
207
208
209
210
211
212
213
214
215
216
217
218
219
220
221
222
223
224
225
226
227
228
229
230
231
232
233
234
235
236
237
238
239
240
241
242
243
244
245
246
247
248
249
250
251
252
253
254
255
256
257
258
259
260
261
262
263
264
265
266
267
268
269
270
271
272
273
274
275
276
277
278
279
280
281
282
283
284
285
286
287
288
289
290
291
292
293
294
295
296
297
298
299
300
301
302
303
304
305
306
307
308
309
310
311
312
313
314
315
316
317
318
319
320
321
322
323
324
325
326
327
328
329
330
331
332
333
334
335
336
337
338
339
340
341
342
343
344
345
346
347
348
349
350
351
352
353
354
355
356
357
358
359
360
361
362
363
364
365
366
367
368
369
370
371
372
373
374
375
376
377
378
379
380
381
382
383
384
385
386
387
388
389
390
391
392
393
394
395
396
397
398
399
400
401
402
403
404
405
406
407
408
409
410
411
412
413
414
415
416
417
418
419
420
421
422
423
424
425
426
427
428
429
430
431
432
433
434
435
436
437
438
439
440
441
442
443
444
445
446
447
448
449
450
451
452
453
454
455
456
457
458
459
460
461
462
463
464
465
466
467
468
469
470
471
472
473
474
475
476
477
478
479
480
481
482
483
484
485
486
487
488
489
490
491
492
493
494
495
496
497
498
499
500
501
502
503
504
505
506
507
508
509
510
511
512
513
514
515
516
517
518
519
520
521
522
523
524
525
526
527
528
529
530
531
532
533
534
535
536
537
538
539
540
541
542
543
544
545
546
547
548
549
550
551
552
553
554
555
556
557
558
559
560
561
562
563
564
565
566
567
568
569
570
571
572
573
574
575
576
577
578
579
580
581
582
583
584
585
586
587
588
589
590
591
592
593
594
595
596
597
598
599
600
601
602
603
604
605
606
607
608
609
610
611
612
613
614
615
616
617
618
619
620
621
622
623
624
625
626
627
628
629
630
631
632
633
634
635
636
637
638
639
640
641
642
643
644
645
646
647
648
649
650
651
652
653
654
655
656
657
658
659
660
661
662
663
664
665
666
667
668
669
670
671
672
673
674
675
676
677
678
679
680
681
682
683
684
685
686
687
688
689
690
691
692
693
694
695
696
697
698
699
700
701
702
703
704
705
706
707
708
709
710
711
712
713
714
715
716
717
718
719
720
721
722
723
724
725
726
727
728
729
730
731
732
733
734
735
736
737
738
739
740
741
742
743
744
745
746
747
748
749
750
751
752
753
754
755
756
757
758
759
760
761
762
763
764
765
766
767
768
769
770
771
772
773
774
775
776
777
778
779
780
781
782
783
784
785
786
787
788
789
790
791
792
793
794
795
796
797
798
799
800
801
802
803
804
805
806
807
808
809
810
811
812
813
814
815
816
817
818
819
820
821
822
823
824
825
826
827
828
829
830
831
832
833
834
835
836
837
838
839
840
841
842
843
844
845
846
847
848
849
850
851
852
853
854
855
856
857
858
859
860
861
862
863
864
865
866
867
868
869
870
871
872
873
874
875
876
877
878
879
880
881
882
883
884
885
886
887
888
889
890
891
892
893
894
895
896
897
898
899
900
901
902
903
904
905
906
907
908
909
910
911
912
913
914
915
916
917
918
919
920
921
922
923
924
925
926
927
928
929
930
931
932
933
934
935
936
937
938
939
940
941
942
943
944
945
946
947
948
949
950
951
952
953
954
955
956
957
958
959
960
961
962
963
964
965
966
967
968
969
970
971
972
973
974
975
976
977
978
979
980
981
982
983
984
985
986
987
988
989
990
991
992
993
994
995
996
997
998
999
1000
1001
1002
1003
1004
1005
1006
1007
1008
1009
1010
1011
1012
1013
1014
1015
1016
1017
1018
1019
1020
1021
1022
1023
1024
1025
1026
1027
1028
1029
1030
1031
1032
1033
1034
1035
1036
1037
1038
1039
1040
1041
1042
1043
1044
1045
1046
1047
1048
1049
1050
1051
1052
1053
1054
1055
1056
1057
1058
1059
1060
1061
1062
1063
1064
1065
1066
1067
1068
1069
1070
1071
1072
1073
1074
1075
1076
1077
1078
1079
1080
1081
1082
1083
1084
1085
1086
1087
1088
1089
1090
1091
1092
1093
1094
1095
1096
1097
1098
1099
1100
1101
1102
1103
1104
1105
1106
1107
1108
1109
1110
1111
1112
1113
1114
1115
1116
1117
1118
1119
1120
1121
1122
1123
1124
1125
1126
1127
1128
1129
1130
1131
1132
1133
1134
1135
1136
1137
1138
1139
1140
1141
1142
1143
1144
1145
1146
1147
1148
1149
1150
1151
1152
1153
1154
1155
1156
1157
1158
1159
1160
1161
1162
1163
1164
1165
1166
1167
1168
1169
1170
1171
1172
1173
1174
1175
1176
1177
1178
1179
1180
1181
1182
1183
1184
1185
1186
1187
1188
1189
1190
1191
1192
1193
1194
1195
1196
1197
1198
1199
1200
1201
1202
1203
1204
1205
1206
1207
1208
1209
1210
1211
1212
1213
1214
1215
1216
1217
1218
1219
1220
1221
1222
1223
1224
1225
1226
1227
1228
1229
1230
1231
1232
1233
1234
1235
1236
1237
1238
1239
1240
1241
1242
1243
1244
1245
1246
1247
1248
1249
1250
1251
1252
1253
1254
1255
1256
1257
1258
1259
1260
1261
1262
1263
1264
1265
1266
1267
1268
1269
1270
1271
1272
1273
1274
1275
1276
1277
1278
1279
1280
1281
1282
1283
1284
1285
1286
1287
1288
1289
1290
1291
1292
1293
1294
1295
1296
1297
1298
1299
1300
1301
1302
1303
1304
1305
1306
1307
1308
1309
1310
1311
1312
1313
1314
1315
1316
1317
1318
1319
1320
1321
1322
1323
1324
1325
1326
1327
1328
1329
1330
1331
1332
1333
1334
1335
1336
1337
1338
1339
1340
1341
1342
1343
1344
1345
1346
1347
1348
1349
1350
1351
1352
1353
1354
1355
1356
1357
1358
1359
1360
1361
1362
1363
1364
1365
1366
1367
1368
1369
1370
1371
1372
1373
1374
1375
1376
1377
1378
1379
1380
1381
1382
1383
1384
1385
1386
1387
1388
1389
1390
1391
1392
1393
1394
1395
1396
1397
1398
1399
1400
1401
1402
1403
1404
1405
1406
1407
1408
1409
1410
1411
1412
1413
1414
1415
1416
1417
1418
1419
1420
1421
1422
1423
1424
1425
1426
1427
1428
1429
1430
1431
1432
1433
1434
1435
1436
1437
1438
1439
1440
1441
1442
1443
1444
1445
1446
1447
1448
1449
1450
1451
1452
1453
1454
1455
1456
1457
1458
1459
1460
1461
1462
1463
1464
1465
1466
1467
1468
1469
1470
1471
1472
1473
1474
1475
1476
1477
1478
1479
1480
1481
1482
1483
1484
1485
1486
1487
1488
1489
1490
1491
1492
1493
1494
1495
1496
1497
1498
1499
1500
1501
1502
1503
1504
1505
1506
1507
1508
1509
1510
1511
1512
1513
1514
1515
1516
1517
1518
1519
1520
1521
1522
1523
1524
1525
1526
1527
1528
1529
1530
1531
1532
1533
1534
1535
1536
1537
1538
1539
1540
1541
1542
1543
1544
1545
1546
1547
1548
1549
1550
1551
1552
1553
1554
1555
1556
1557
1558
1559
1560
1561
1562
1563
1564
1565
1566
1567
1568
1569
1570
1571
1572
1573
1574
1575
1576
1577
1578
1579
1580
1581
1582
1583
1584
1585
1586
1587
1588
1589
1590
1591
1592
1593
1594
1595
1596
1597
1598
1599
1600
1601
1602
1603
1604
1605
1606
1607
1608
1609
1610
1611
1612
1613
1614
1615
1616
1617
1618
1619
1620
1621
1622
1623
1624
1625
1626
1627
1628
1629
1630
1631
1632
1633
1634
1635
1636
1637
1638
1639
1640
1641
1642
1643
1644
1645
1646
1647
1648
1649
1650
1651
1652
1653
1654
1655
1656
1657
1658
1659
1660
1661
1662
1663
1664
1665
1666
1667
1668
1669
1670
1671
1672
1673
1674
1675
1676
1677
1678
1679
1680
1681
1682
1683
1684
1685
1686
1687
1688
1689
1690
1691
1692
1693
1694
1695
1696
1697
1698
1699
1700
1701
1702
1703
1704
1705
1706
1707
1708
1709
1710
1711
1712
1713
1714
1715
1716
1717
1718
1719
1720
1721
1722
1723
1724
1725
1726
1727
1728
1729
1730
1731
1732
1733
1734
1735
1736
1737
1738
1739
1740
1741
1742
1743
1744
1745
1746
1747
1748
1749
1750
1751
1752
1753
1754
1755
1756
1757
1758
1759
1760
1761
1762
1763
1764
1765
1766
1767
1768
1769
1770
1771
1772
1773
1774
1775
1776
1777
1778
1779
1780
1781
1782
1783
1784
1785
1786
1787
1788
1789
1790
1791
1792
1793
1794
1795
1796
1797
1798
1799
1800
1801
1802
1803
1804
1805
1806
1807
1808
1809
1810
1811
1812
1813
1814
1815
1816
1817
1818
1819
1820
1821
1822
1823
1824
1825
1826
1827
1828
1829
1830
1831
1832
1833
1834
1835
1836
1837
1838
1839
1840
1841
1842
1843
1844
1845
1846
1847
1848
1849
1850
1851
1852
1853
1854
1855
1856
1857
1858
1859
1860
1861
1862
1863
1864
1865
1866
1867
1868
1869
1870
1871
1872
1873
1874
1875
1876
1877
1878
1879
1880
1881
1882
1883
1884
1885
1886
1887
1888
1889
1890
1891
1892
1893
1894
1895
1896
1897
1898
1899
1900
1901
1902
1903
1904
1905
1906
1907
1908
1909
1910
1911
1912
1913
1914
1915
1916
1917
1918
1919
1920
1921
1922
1923
1924
1925
1926
1927
1928
1929
1930
1931
1932
1933
1934
1935
1936
1937
1938
1939
1940
1941
1942
1943
1944
1945
1946
1947
1948
1949
1950
1951
1952
1953
1954
1955
1956
1957
1958
1959
1960
1961
1962
1963
1964
1965
1966
1967
1968
1969
1970
1971
1972
1973
1974
1975
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
2031
2032
2033
2034
2035
2036
2037
2038
2039
2040
2041
2042
2043
2044
2045
2046
2047
2048
2049
2050
2051
2052
2053
2054
2055
2056
2057
2058
2059
2060
2061
2062
2063
2064
2065
2066
2067
2068
2069
2070
2071
2072
2073
2074
2075
2076
2077
2078
2079
2080
2081
2082
2083
2084
2085
2086
2087
2088
2089
2090
2091
2092
2093
2094
2095
2096
2097
2098
2099
2100
2101
2102
2103
2104
2105
2106
2107
2108
2109
2110
2111
2112
2113
2114
2115
2116
2117
2118
2119
2120
2121
2122
2123
2124
2125
2126
2127
2128
2129
2130
2131
2132
2133
2134
2135
2136
2137
2138
2139
2140
2141
2142
2143
2144
2145
2146
2147
2148
2149
2150
2151
2152
2153
2154
2155
2156
2157
2158
2159
2160
2161
2162
2163
2164
2165
2166
2167
2168
2169
2170
2171
2172
2173
2174
2175
2176
2177
2178
2179
2180
2181
2182
2183
2184
2185
2186
2187
2188
2189
2190
2191
2192
2193
2194
2195
2196
2197
2198
2199
2200
2201
2202
2203
2204
2205
2206
2207
2208
2209
22

100

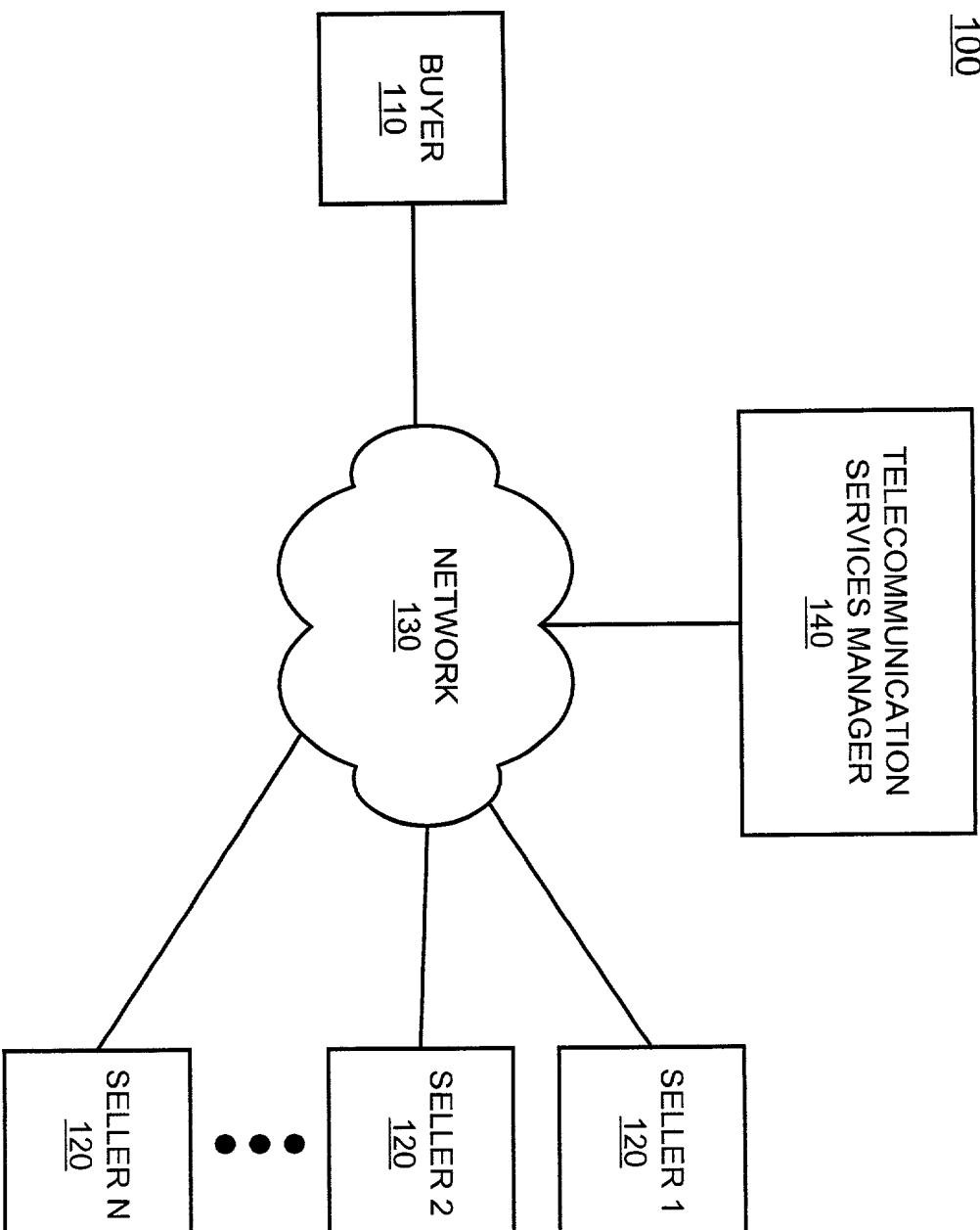


FIG. 1

140

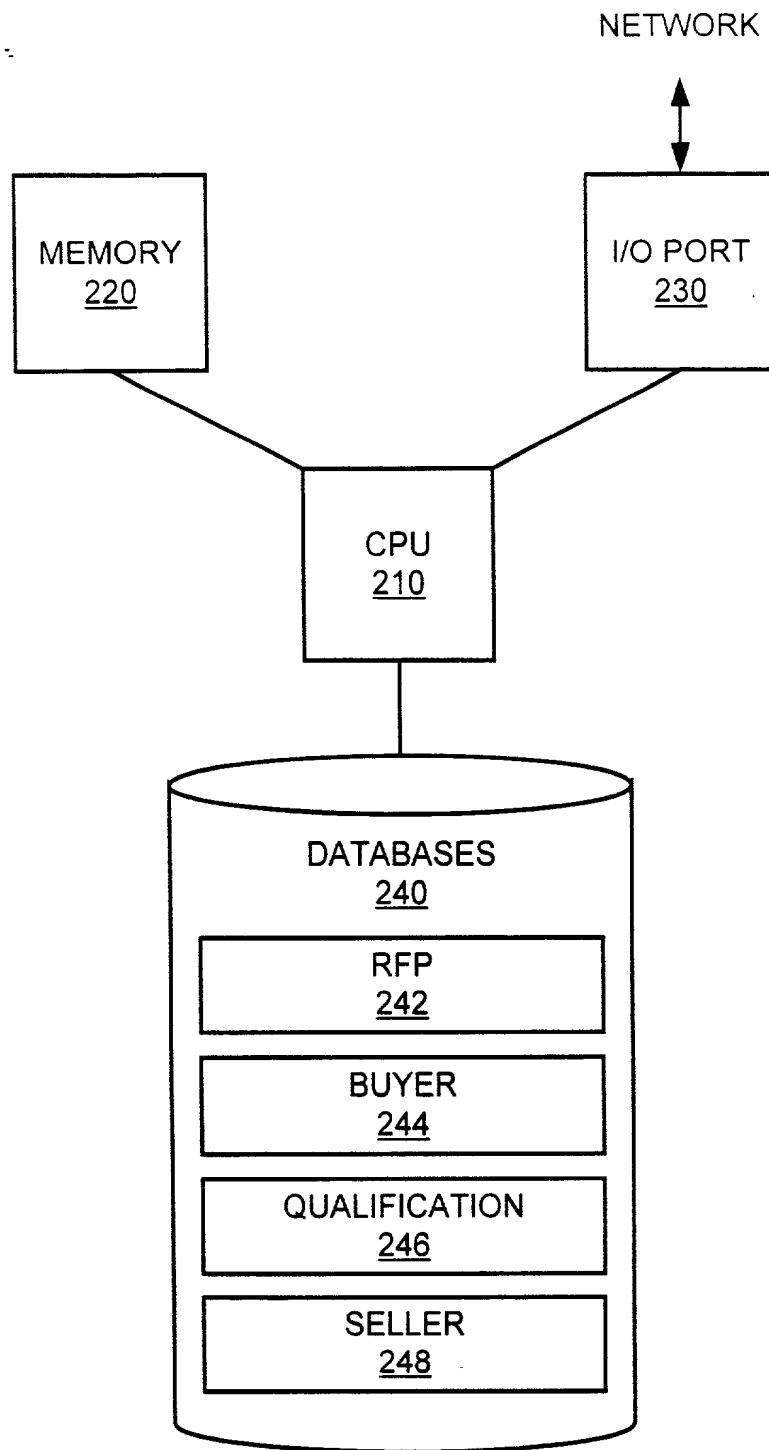


FIG. 2

242

RFP NO. 1	BUYER INFO	TYPES OF SERVICE	QUESTIONS	PRIOR USAGE
RFP NO. 2	BUYER INFO	TYPES OF SERVICE	QUESTIONS	PRIOR USAGE
RFP NO. 3	BUYER INFO	TYPES OF SERVICE	QUESTIONS	PRIOR USAGE
• •				
RFP NO. N	BUYER INFO	TYPES OF SERVICE	QUESTIONS	PRIOR USAGE

310 320 330 340 350

FIG. 3A

244

BUYER ID NAME	RFP NO. N1	RFP REPLY 1	RFP REPLY 2	• • •	RFP REPLY N
	RFP NO. N2	RFP REPLY 1	RFP REPLY 2	• • •	RFP REPLY M
	RFP NO. N3	RFP REPLY 1	RFP REPLY 2	• • •	RFP REPLY L
• •					
BUYER ID NAME	RFP NO. M1	RFP REPLY 1	RFP REPLY 2	• • •	RFP REPLY N

360 370 380

FIG. 3B

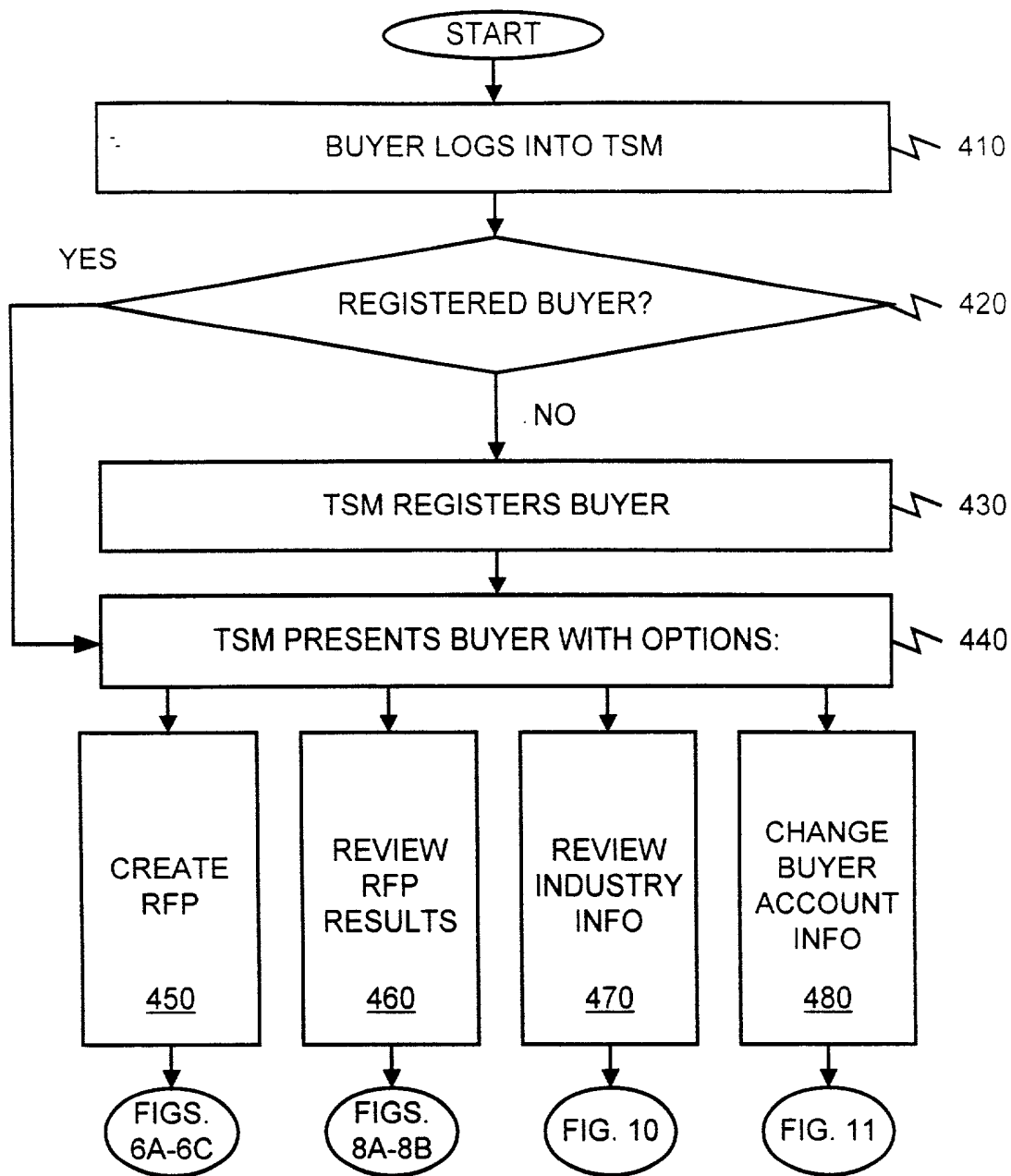


FIG. 4

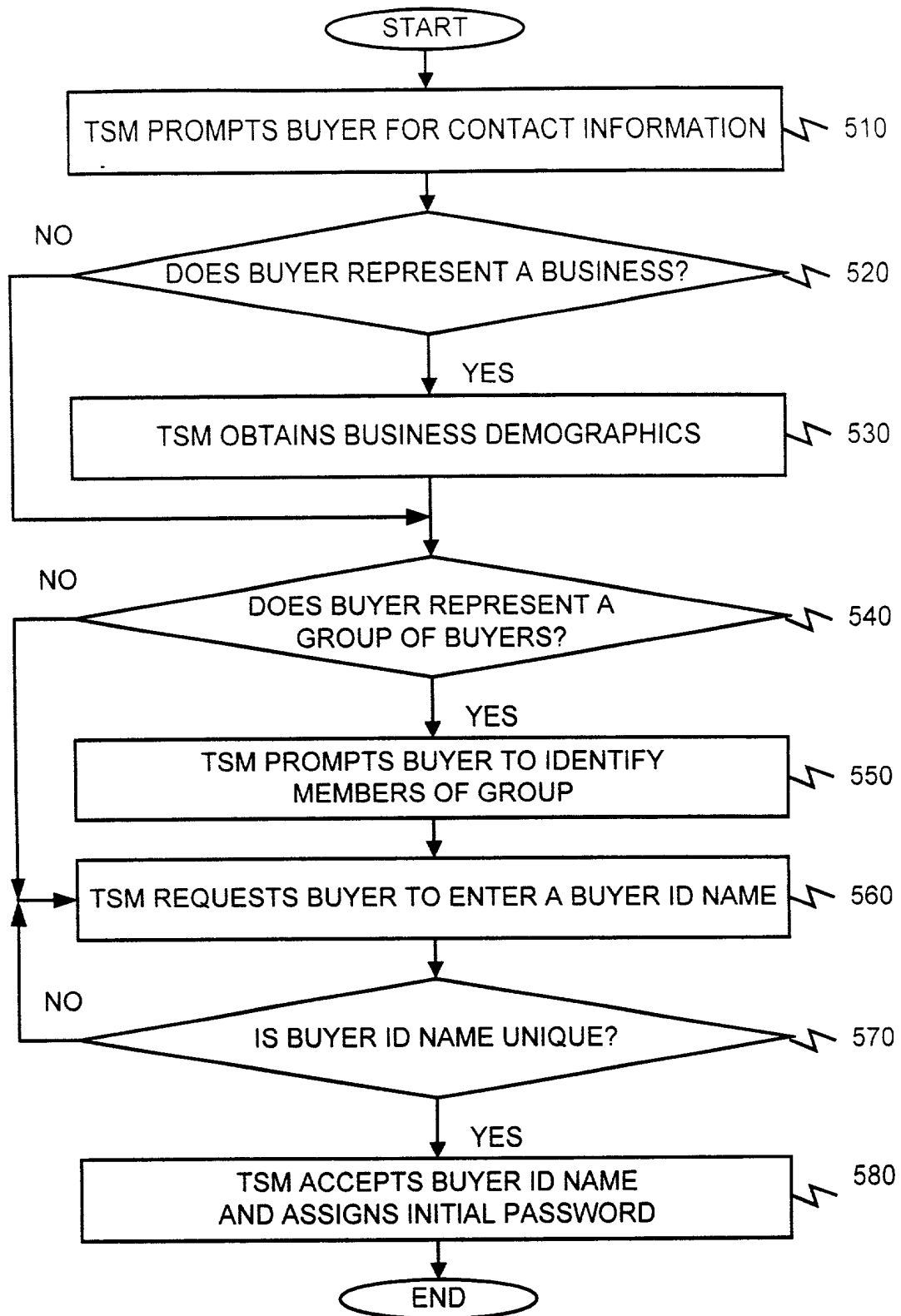


FIG. 5

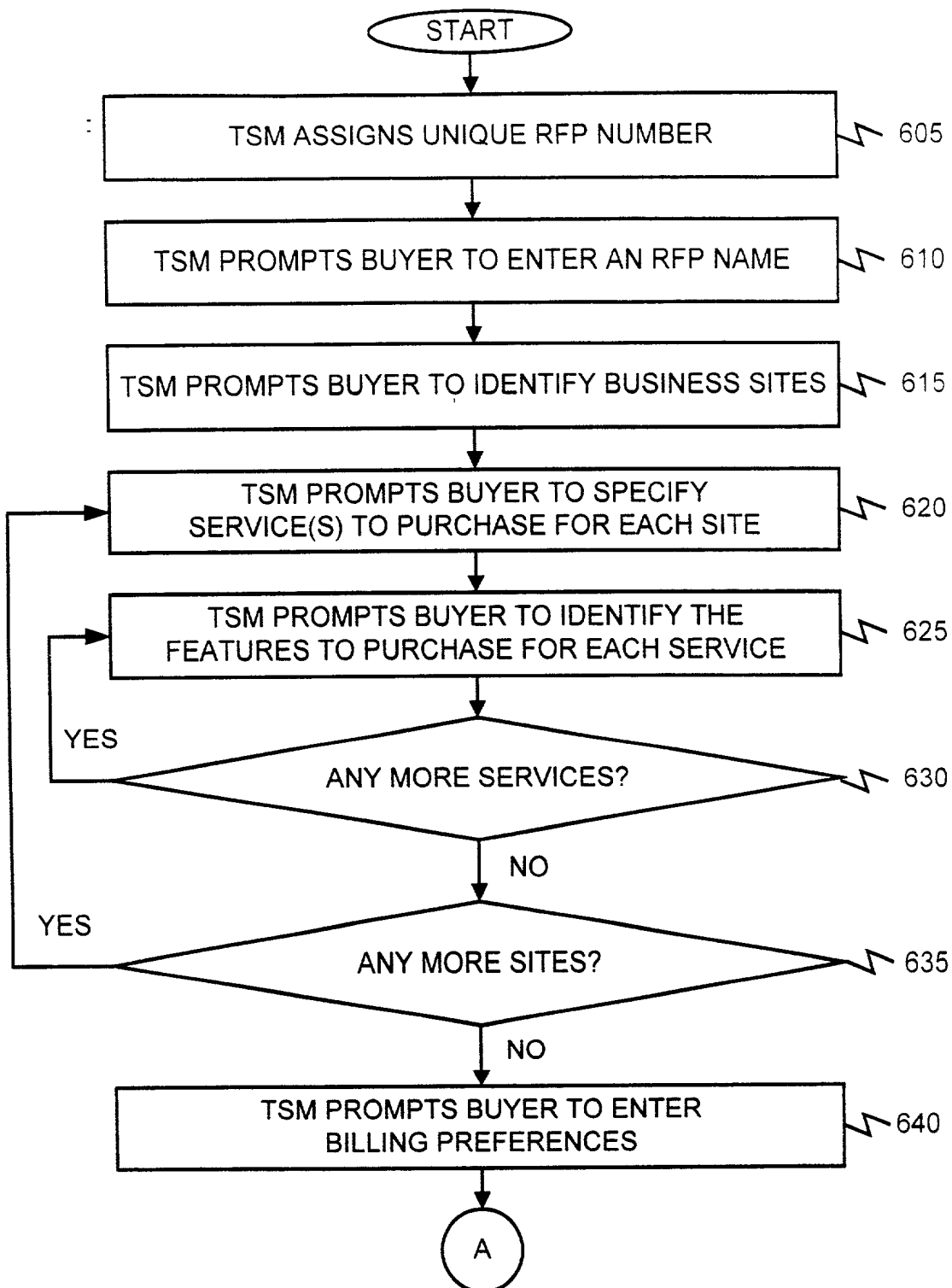


FIG. 6A

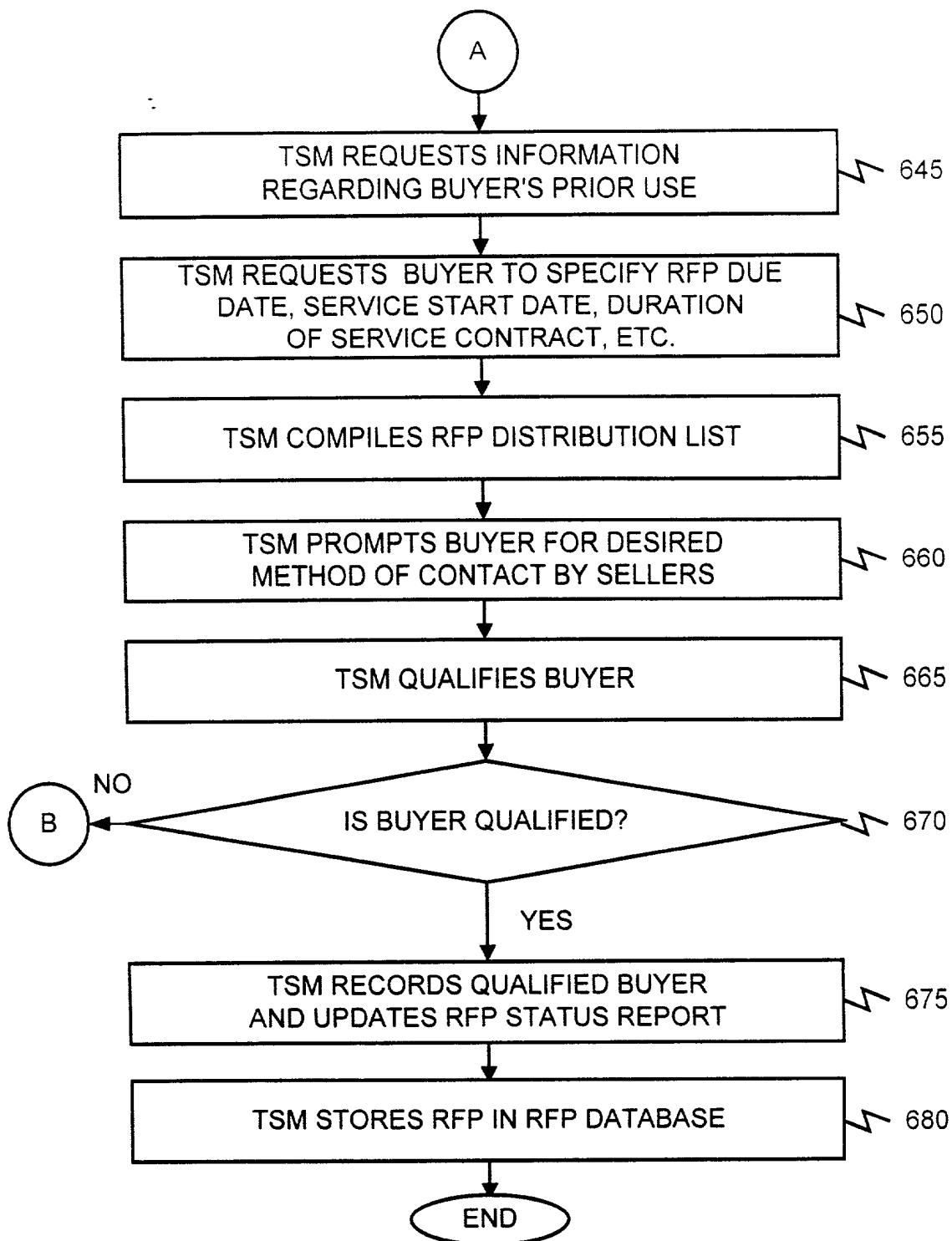


FIG. 6B

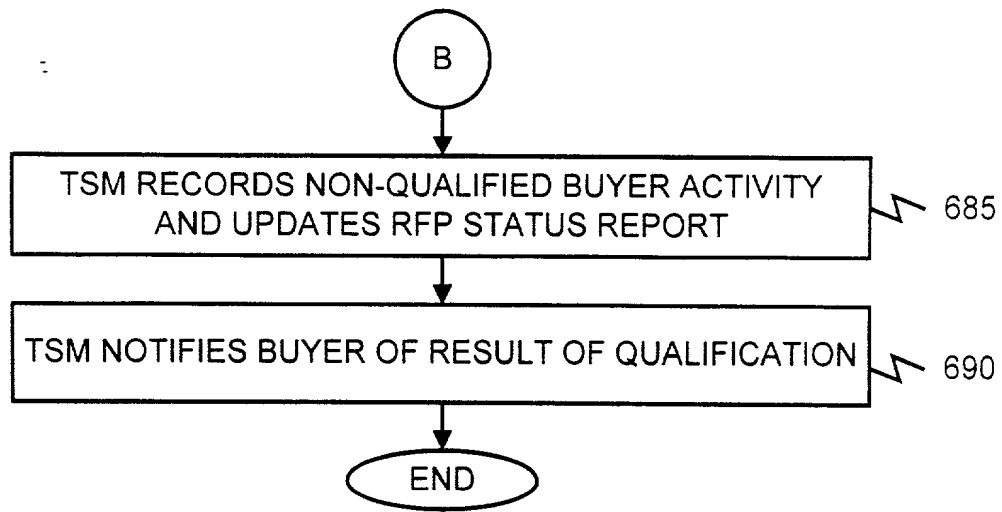


FIG. 6C

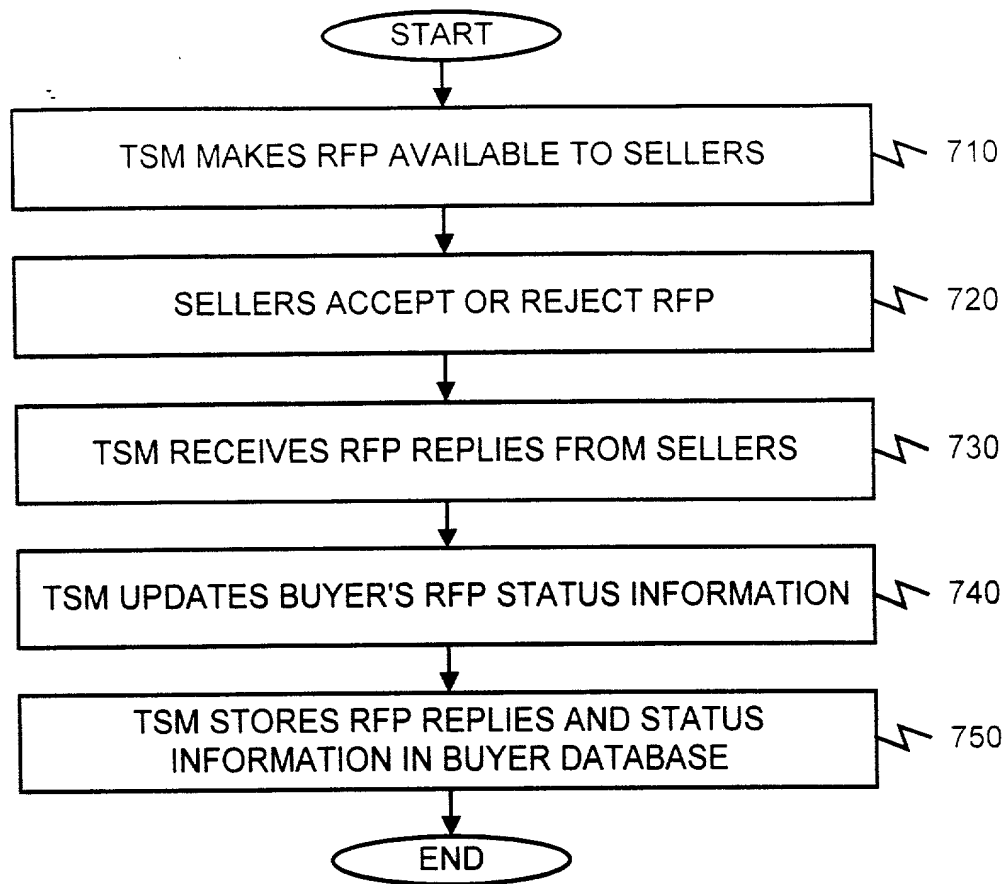


FIG. 7

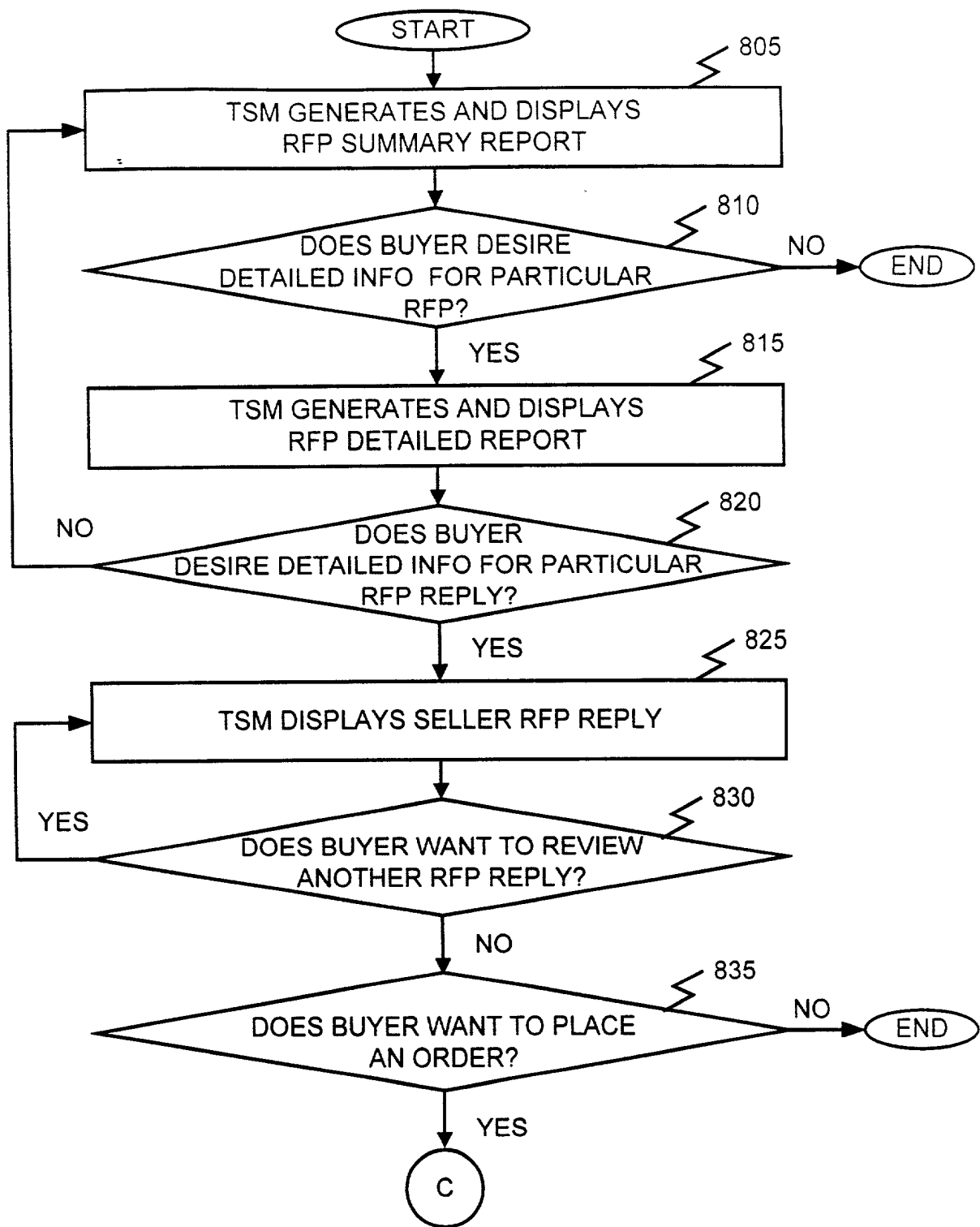


FIG. 8A

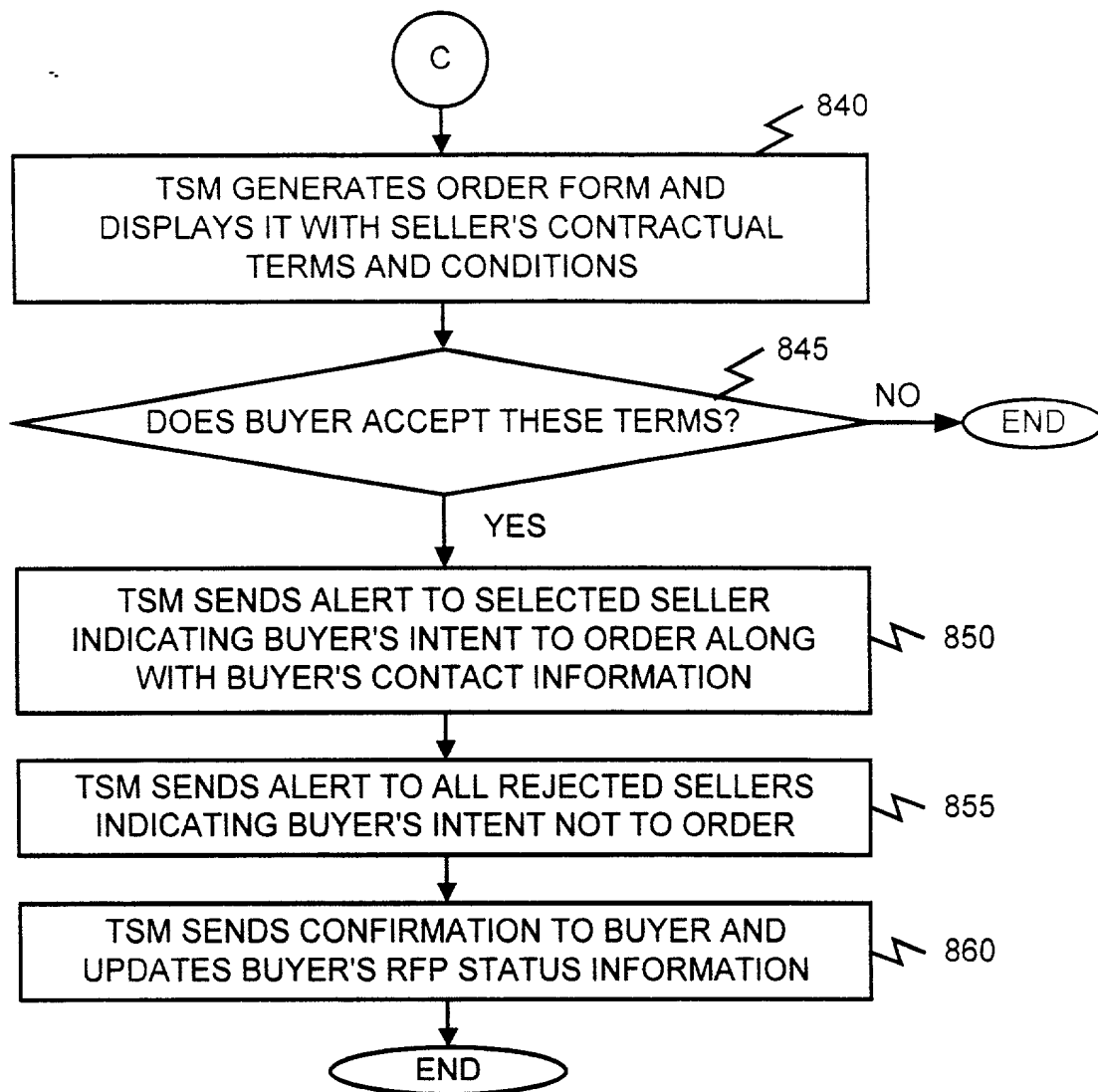



FIG. 8B

900

TELECOMMUNICATIONS SERVICES MANAGER WEB SITE

FILE EDIT VIEW GO WINDOW HELP



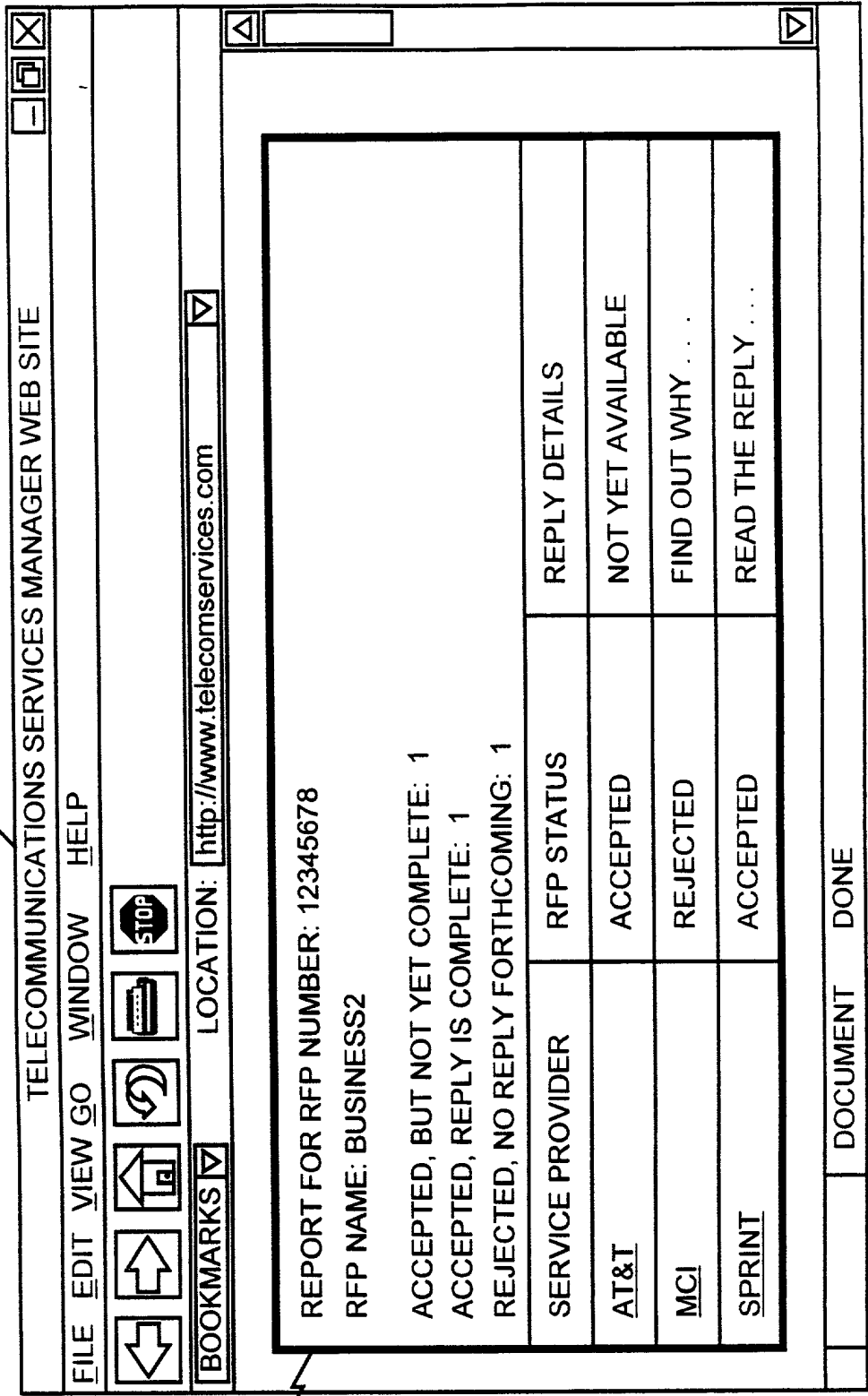
BOOKMARKS LOCATION: <http://www.telecomservices.com>

RFP NUMBER	RFP NAME	SUBMIT DATE	DUE DATE	TOTAL NO. OF REQUESTED BIDDERS	TOTAL NO. OF RESPONSES SO FAR
87654321	HOME	04/01/99	08/01/99	2	0
98765432	BUSINESS1	04/05/99	07/01/99	200	53
12345678	BUSINESS2	04/07/99	09/01/99	200	25

DOCUMENT DONE

FIG. 9A

980



990

FIG. 9B

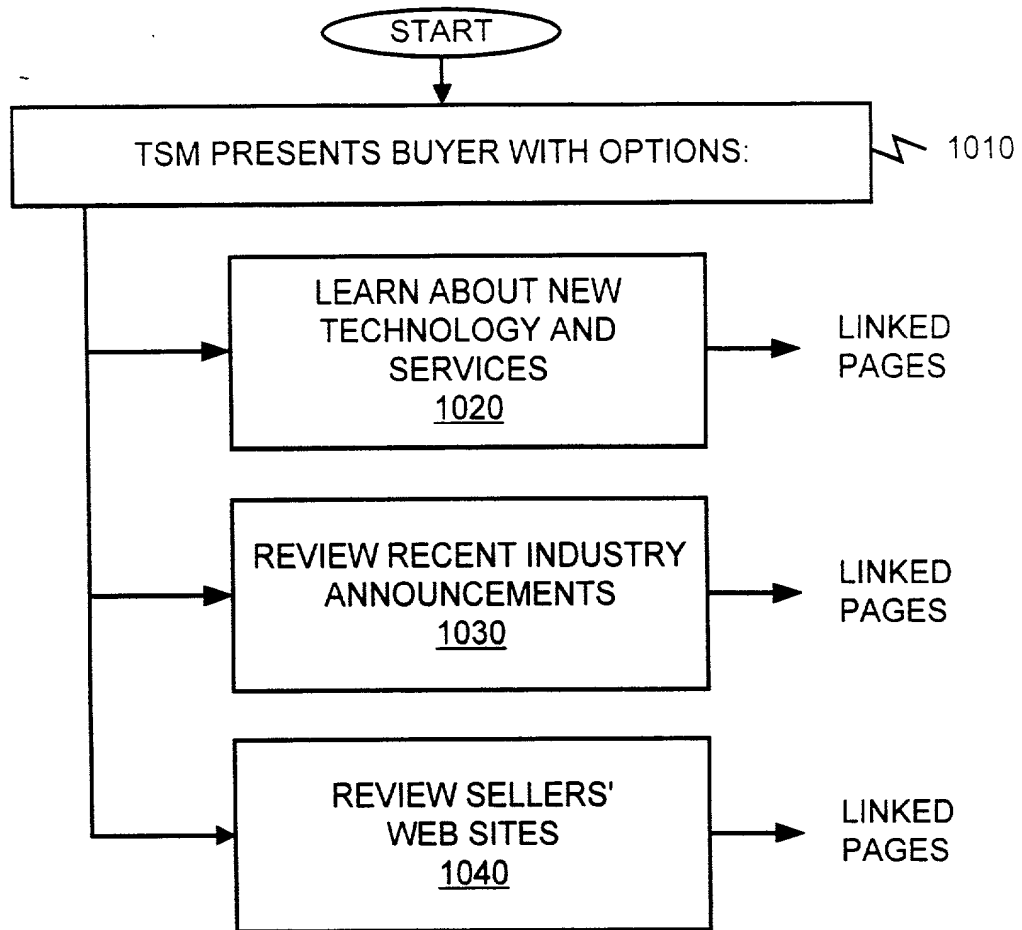


FIG. 10

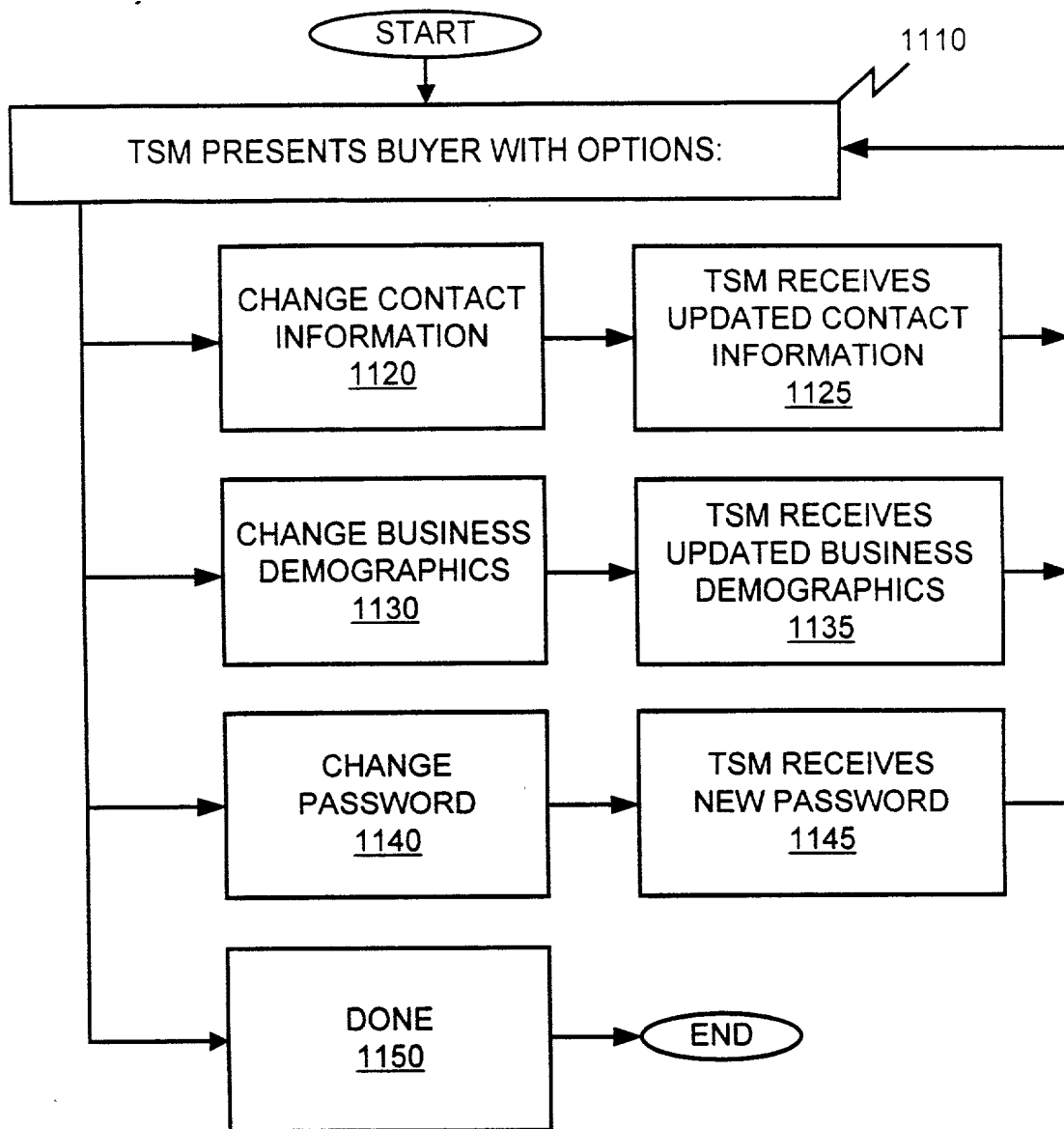


FIG. 11

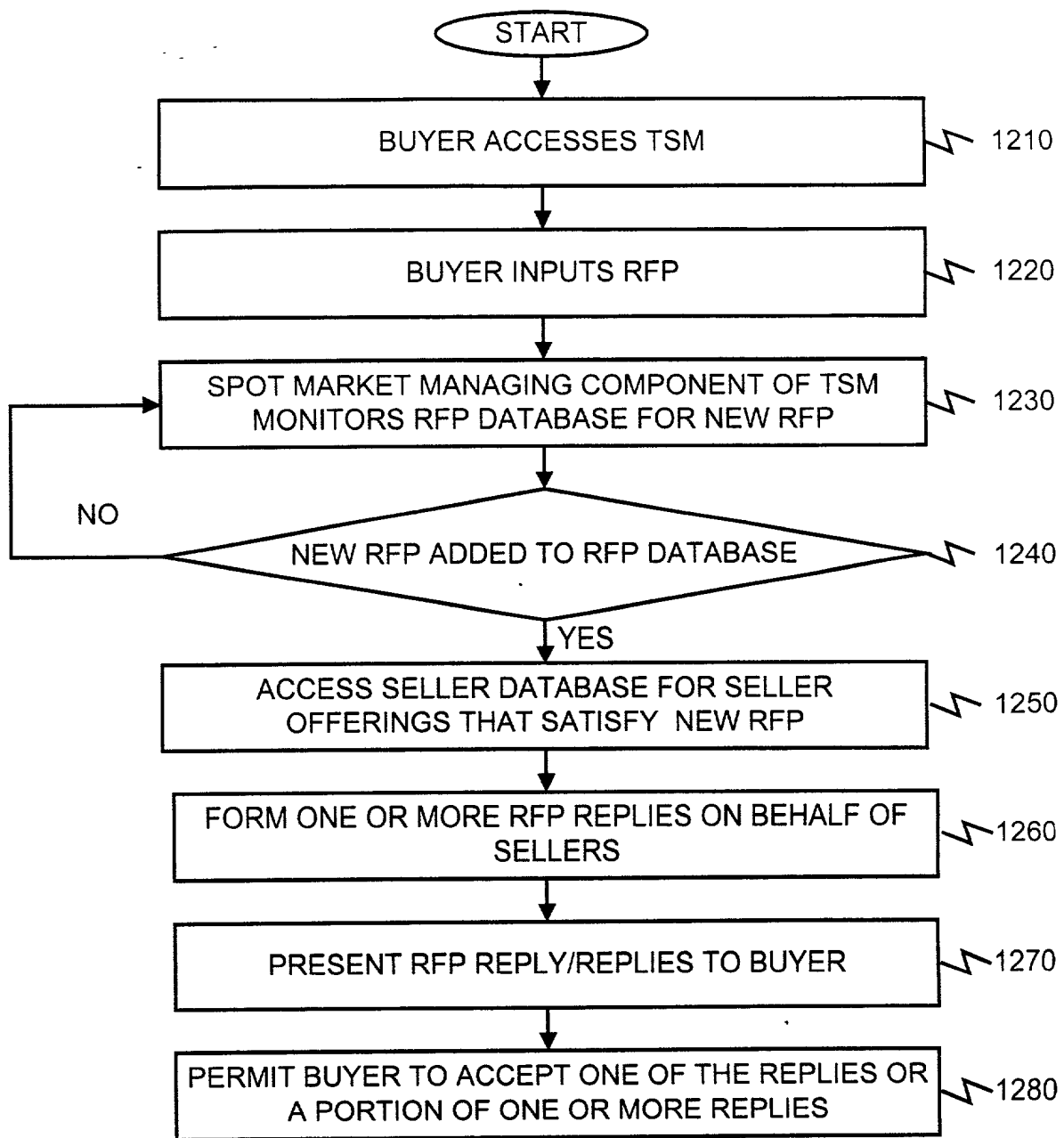


FIG. 12

DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that: my residence, post office address and citizenship are as stated below next to my name; I believe I am the original, first, and sole inventor (if only one name is listed below) or an original, first, and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled: SYSTEMS AND METHODS FOR DISTRIBUTING TELECOMMUNICATION SERVICES VIA A NETWORK, the specification of which ☒ is attached and/or ☐ was filed on _____ as United States Application Serial No. _____ or PCT International Application No. _____ and was amended on _____ (if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above. I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR § 1.56.

I hereby claim foreign priority benefits under 35 U.S.C. § 119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate or § 365(a) of any PCT international application(s) designating at least one country other than the United States, listed below and have also identified below, any foreign application(s) for patent or inventor's certificate, or any PCT International application(s) having a filing date before that of the application(s) of which priority is claimed:

Country	Application Number	Date of Filing	Priority Claimed Under 35 U.S.C.
			<input type="checkbox"/> YES <input type="checkbox"/> NO

I hereby claim the benefit under 35 U.S.C. § 119(e) of any United States provisional application(s) listed below:

Application Number	Date of Filing

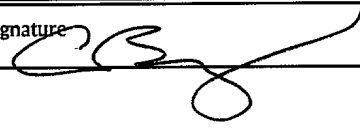

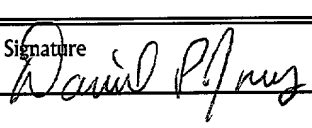
I hereby claim the benefit under 35 U.S.C. § 120 of any United States application(s) or § 365(c) of any PCT International application(s) designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application(s) in the manner provided by the first paragraph of 35 U.S.C. § 112, I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR § 1.56 which became available between the filing date of the prior application(s) and the national or PCT International filing date of this application:

Application Number	Date of Filing	Status (Patented, Pending, Abandoned)
09/390,025	September 3, 1999	Pending
60/138,509	June 10, 1999	Pending

I hereby appoint the following attorney and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, L.L.P., Douglas B. Henderson, Reg. No. 20,291; Ford F. Farabow, Jr., Reg. No. 20,630; Arthur S. Garrett, Reg. No. 20,338; Donald R. Dunner, Reg. No. 19,073; Brian G. Brunsvold, Reg. No. 22,593; Tipton D. Jennings, IV, Reg. No. 20,645; Jerry D. Voight, Reg. No. 23,020; Laurence R. Hefter, Reg. No. 20,827; Kenneth E. Payne, Reg. No. 23,098; Herbert H. Mintz, Reg. No. 26,691; C. Larry O'Rourke, Reg. No. 26,014; Albert J. Santorelli, Reg. No. 22,610; Michael C. Elmer, Reg. No. 25,857; Richard H. Smith, Reg. No. 20,609; Stephen L. Peterson, Reg. No. 26,325; John M. Romary, Reg. No. 26,331; Bruce C. Zotter, Reg. No. 27,680; Dennis P. O'Reilly, Reg. No. 27,932; Allen M. Sokal, Reg. No. 26,695; Robert D. Bajefsky, Reg. No. 25,387; Richard L. Stroup, Reg. No. 28,478; David W. Hill, Reg. No. 28,220; Thomas L. Irving, Reg. No. 28,619; Charles E. Lipsey, Reg. No. 28,165; Thomas W. Winland, Reg. No. 27,605; Basil J. Lewis, Reg. No. 28,818; Martin I. Fuchs, Reg. No. 28,508; E. Robert Yoches, Reg. No. 30,120; Barry W. Graham, Reg. No. 29,924; Susan Haberman Griffen, Reg. No. 30,907; Richard B. Racine, Reg. No. 30,415; Thomas H. Jenkins, Reg. No. 30,857; Robert E. Converse, Jr., Reg. No. 27,432; Clair X. Mullen, Jr., Reg. No. 20,348; Christopher P. Foley, Reg. No. 31,354; John C. Paul, Reg. No. 30,413; Roger D. Taylor, Reg. No. 28,992; David M. Kelly, Reg. No. 30,953; Kenneth J. Meyers, Reg. No. 25,146; Carol P. Einaudi, Reg. No. 32,220; Walter Y. Boyd, Jr., Reg. No. 31,738; Steven M. Anzalone, Reg. No. 32,095; Jean B. Fordis, Reg. No. 32,984; Barbara C. McCurdy, Reg. No. 32,120; James K. Hammond, Reg. No. 31,964; Richard V. Burgujian, Reg. No. 31,744; J. Michael Jakes, Reg. No. 32,824; Thomas W. Banks, Reg. No. 32,719; Christopher P. Isaac, Reg. No. 32,616; Bryan C. Diner, Reg. No. 32,409; M. Paul Barker, Reg. No. 32,013; Andrew Chanho Sonu, Reg. No. 33,457; David S. Forman, Reg. No. 33,694; Vincent P. Kovalick, Reg. No. 32,867; James W. Edmondson, Reg. No. 33,871; Michael R. McGurk, Reg. No. 32,045; Joann M. Neth, Reg. No. 36,363; Gerson S. Panitch, Reg. No. 33,751; Cheri M. Taylor, Reg. No. 33,216; Charles E. Van Horn, Reg. No. 40,266; Linda A. Wadler, Reg. No. 33,218; Jeffrey A. Berkowitz, Reg. No. 36,743; Michael R. Kelly, Reg. No. 33,921; and James B. Monroe, Reg. No. 33,971; and _____ . Please address all correspondence to FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, L.L.P. 1300 I Street, N.W., Washington, D.C. 20005, Telephone No. (202) 408-4000.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Full Name of First Inventor Charles A. PEYSER	Inventor's Signature <i>Charles A. Peyser</i>	Date 10/14/99
Residence	Citizenship USA	
Post Office Address 7 Arrowood Terrace, Bethesda, MD 20817		

Full Name of Second Inventor Constance BEYER	Inventor's Signature 	Date October 17, 1999
Residence		Citizenship USA
Post Office Address 908 Lynton Place, McLean, VA		
Full Name of Third Inventor Michael D. McLAUGHLIN	Inventor's Signature 	Date October 9, 1999
Residence		Citizenship USA
Post Office Address 20561 Montalvo Lane, Saratoga, CA 95070		
Full Name of Fourth Inventor Daniel JONES	Inventor's Signature 	Date 10/14/99
Residence		Citizenship USA
Post Office Address 1724 LAKESHORE CREST DRIVE #36, RESTON, VA 20190		
Full Name of Fifth Inventor	Inventor's Signature	Date
Residence		Citizenship
Post Office Address		
Full Name of Sixth Inventor	Inventor's Signature	Date
Residence		Citizenship
Post Office Address		
Full Name of Seventh Inventor	Inventor's Signature	Date
Residence		Citizenship
Post Office Address		
Full Name of Eighth Inventor	Inventor's Signature	Date
Residence		Citizenship
Post Office Address		
Full Name of Ninth Inventor	Inventor's Signature	Date
Residence		Citizenship
Post Office Address		